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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,110	01/12/2001	Robert Groten	22750/466	1970

26646 7590 01/22/2003

KENYON & KENYON  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/22/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/760,110

Applicant(s)

GROTEN ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 21-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of claims 1-20 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that groups I and II are not independent inventions because claims 21-25 are drawn to a method of manufacturing a cleaning cloth having the characteristics of claims 1-20. Further, Applicants argue that the examination of claims 1-20 would involve searching all of the classes and subclasses in which claims 20-25 are classified. This is not found persuasive because the product as claimed does not require the use of high pressure fluid jets for bonding and the product does not require that the filaments are split (it is optional). Therefore, the examination of claims 1-20 will not involve searching all of the classes and subclasses in which claims 20-25 are classified. As stated on paper 6, the product can be made by using thermal bonding of the continuous multicomponent filaments to produce the nonwoven.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GILLESPIE et al. (US 5,783,503) in view of ZILG et al. (US 5,725,927).

GILLESPIE et al. teaches multicomponent thermoplastic continuous filaments that can be produced by meltspinning. (Abstract) The reference teaches that fine filaments, including

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sub-denier and micro-filaments of one or more components, can be produced if the filament components are small in diameter. Sub-denier filaments typically have deniers in the range of 1 denier per filaments or less. Micro-filaments typically have deniers in the range of from about 0.1 to 0.3 denier per filament [*equivalent to 0.111 to 0.333 dtex per filament*]. (Column 6, lines 24-29) Further, the reference teaches that their invention provides multicomponent thermoplastic continuous filaments that can be split into smaller filaments upon exiting a spinneret in free fall from the spinneret. (Column 2, lines 62-65) GILLESPIE et al. further teaches that the products that can be produced with the filaments of their invention include continuous filament nonwoven webs. The nonwoven webs of their invention have increased tensile, softness, barrier properties, and water transport properties compared to typical spun-laid and spun-bonded webs that have a single component. (Column 3, lines 17-34)

GILLESPIE et al. teaches the use of multicomponent filaments that are bicomponent filaments in a "segmented pie" configuration having two different thermoplastic polymeric components. (Refer to Fig. 1, Column 4, lines 18-22) Further, the reference discloses that suitable polymers for practice of the invention include polyolefins, including polyamides and polyesters. (Column 5, lines 4-20). The reference also discloses the use of bicomponent filaments in a side-by-side configuration. (Column 5, lines 66-67). The reference also teaches that nonwoven fabrics made with the splittable filaments of their invention should be particularly useful as components for disposable absorbent articles and wipes; medical barrier fabrics, including garments and wraps; and filtration media. (Column 6, lines 60-65)

However, the reference does not disclose that the basis weight of the microfilament nonwoven is from 30 g/m<sup>2</sup> to 500 g/m<sup>2</sup>.

ZILG et al. discloses a reusable cleaning cloth for damp and dry cleaning of surfaces. The cloth is made of a textile base layer of non-woven fibers and, on the surface that provides the cleaning action, a plurality of filament loops, which project out of this surface. (Abstract) The reference teaches that the filaments loops are obtained by needle-tufting the textile base layer, further that they can consist of the same or different textile material, such as natural, regenerated and synthetic fibers, which can be anti-static, treated to be anti-static or treated with substances which promote cleansing. (Column 1, lines 5-52) It is noted that the surface produced by the ZILG et al. cleaning cloth is similar to the surface produced by napping, which produces a downy surface in the cloth when part of the fiber is raised from the basic structure.

Further, the ZILG et al. reference teaches that the fiber thickness can be adapted to the particular intended use; for cleaning rougher surfaces, titers of 100 dtex are preferred choice; for polished surfaces, fiber or filament thickness down to 1 dtex can be used. Depending on the particular use, the surface weight of the cloth can vary from 50 to 500 g/m<sup>2</sup>. For example, for manual work lighter types will be preferred, while cloths used as components of cleaning machines and equipment can have a weight up to 500 g/m<sup>2</sup>, in order to increase the pressure during the cleaning process. (Column 4, lines 40-49)

Since both GILLESPIE et al. and ZILG et al. are from the same field of endeavor, the purpose disclosed by ZILG et al. would have been recognized in the pertinent art of GILLESPIE et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the cloth to have a basis weight between 50 to 500 g/m<sup>2</sup> with the motivation of using a higher weight in order have a cleaning cloth that can be used in

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applications such as cleaning machines and equipment that will stand increased pressure during the cleaning process as disclosed by ZILG et al. (Column 4, lines 44-49).

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GILLESPIE et al. (US 5,783,503) *in view of MEITNER (US 4,298,649)*.

7/10/03  
GILLESPIE et al. teaches multicomponent thermoplastic continuous filaments that can be produced by melt spinning. (Abstract) The reference teaches that fine filaments, including sub-denier and microfilaments of one or more components, can be produced if the filament components are small in diameter. Sub-denier filaments typically have deniers in the range of 1 denier per filaments or less. Microfilaments typically have deniers in the range of from about 0.1 to 0.3 denier per filament [equivalent to 0.111 to 0.333 dtex per filament]. (Column 6, lines 24-29) Further, the reference teaches that their invention provides multicomponent thermoplastic continuous filaments that can be split into smaller filaments upon exiting a spinneret in free fall from the spinneret. (Column 2, lines 62-65) GILLESPIE et al. further teaches that the products that can be produced with the filaments of their invention include continuous filament nonwoven webs. The nonwoven webs of their invention have increased tensile, softness, barrier properties, and water transport properties compared to typical spun-laid and spun-bonded webs that have a single component. (Column 3, lines 17-34)

GILLESPIE et al. teaches the use of multicomponent filaments that are bicomponent filaments in a "segmented pie" configuration having two different thermoplastic polymeric components. (Refer to Fig. 1, Column 4, lines 18-22) Further, the reference discloses that suitable polymers for practice of the invention include polyolefins, including polyamides and polyesters. (Column 5, lines 4-20). The reference also discloses the use of bicomponent

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filaments in a side-by-side configuration. (Column 5, lines 66-67). The reference also teaches that nonwoven fabrics made with the splittable filaments of their invention should be particularly useful as components for disposable absorbent articles and wipes; medical barrier fabrics, including garments and wraps; and filtration media. (Column 6, lines 60-65)

However, the reference does not disclose that the basis weight of the microfilament nonwoven is from  $30 \text{ g/m}^2$  to  $500 \text{ g/m}^2$ .

MEITNER discloses a nonwoven wiper formed by combining a meltblown nonwoven web of microfibers having a basis weight in the range of from about  $0.5 \text{ oz/yd}^2$  to  $6 \text{ oz/yd}^2$  [equivalent to  $17 \text{ g/m}^2$  to  $203.76 \text{ g/m}^2$ ], including fibers of an average diameter in the range of up to about 10 microns with a web of split filaments such as fibrillated thermoplastic film or foam forming a network of fine interconnected fibers. The combination is bonded by pattern calendaring and preferably contains an ionic or nonionic surfactant in the amount of about 0.1% to 1.0% by weight. (Column 2, lines 14-23). It is noted that while the MEITNER reference teaches a nonwoven formed by a combination of fibers, the final product of the present application as claimed will have a combination of fibers after being split. The Examiner has incorporated the MEITNER reference particularly to provide evidence that it is known to use microfilament nonwovens with the basis weight claimed in the present invention in the art of cleaning cloths.

Since both GILLESPIE et al. and MEITNER are from the same field of endeavor, the purpose disclosed by MEITNER would have been recognized in the pertinent art of GILLESPIE et al.

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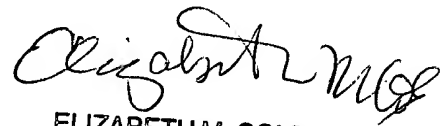
It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the nonwoven fabric to have a basis weight in the range of from about 0.5 oz/yd<sup>2</sup> to 6 oz/yd<sup>2</sup> with the motivation of producing a wiping material that has a reduced tendency to pick up metal chips that could result in facial and hand cuts and abrasions of personnel subsequently using the wiper as disclosed by MEITNER (Column 1, lines 20-35).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:30-3:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

nlt  
January 16, 2003

  
ELIZABETH M. COLE  
PRIMARY EXAMINER